

# **Destination Hydracon**

## **Time**

two or three 45-minute periods

## **Vocabulary**

natural resources, natural resource management, pollutant, potable water, pristine, water quality, wilderness

## **Objectives**

Students will be able to:

- ❑ relate to natural resources early Euro-American explorers discovered in Iowa.
- ❑ identify ways people have affected Iowa's natural resources.

## **Method**

Students read a story about exploration and exploitation of an imaginary world. They write a paper describing what they find on the imaginary world and then research the history of settlement of their county/town. They discuss effects people have had on natural resources in their area.

## **Materials**

copies of *Student Handout*  
writing materials  
paper

## **Background**

The first explorers of Iowa ventured into a world basically unknown to Euro-Americans. Some came as early as 1673, but most came after the Louisiana Purchase in 1803. The United States was only 29 years old when the majority of explorers arrived in Iowa.

A new age was coming. Explorers went to unknown places and returned with tales of their adventures. The journals and letters to President Jefferson from Captain Meriwether Lewis encouraged many people to venture west and start new lives. Lewis and Clark also discovered new plants, animals, people, and navigation routes. Albert Lea's journal perhaps had the most profound effect on the immigration of Euro-Americans to present day Iowa. The following are entries from Clark's and Lea's journals.

- "Both wood-land and prairie, thus far, are exceedingly fertile, the soil being a black loam based upon clay. The trees are usually oak and hickory, and the woods are free from undergrowth; and no stone is to be found, except siliceous pebbles and granitic boulders." – Albert Lea, 1835
- "... [the Cedar River] is 45 yds wide, 4½ ft deep, with a current of ¾ mile per hour; and it is fed also by lakes: from these facts it may be inferred with great probability that keelboats may be taken to its very source, during severally months of the year, and that even steamboats of light draught may navigate it advantageously." – Albert Lea, 1835
- "This being my birth day I order'd a Saddle of fat Vennison, an Elk fleece & a Bevertail to be cooked and a Desert of Cheries, Plubs, Raspberries Currents and grapes of a Supr. Quality. ... Musquetors verry troublesome, the Praries Contain Cheres, Apple, Grapes, Currents, Rasp burry, Gooseberris Hastlenuts and a great Variety of Plants and flours... What a field for a Botents [botanist] and a natirless [naturalist]" – Clark, Aug 1, 1804

- “we Stopped to Dine under Some high Trees near the high land on the L.S. in a few minits Cought three verry large Catfish (3) one nearly white, Those fish are in great plenty on the Sides of the river and verry fat, a quart of Oile Came out of the Surpolous fat of one of those fish” – Clark, July 29, 1804

Since no census was performed in Iowa until the late 1800s, it is difficult to estimate the number of people in Iowa before explorers arrived. For thousands of years, various cultures lived here. Around the time of European exploration, members of the Oneota Culture lived in the Midwest. This culture was traditionally composed of the Winnebago, Ioway-Oto, and Missouri.

Some members of the Oneota Culture lived in villages before and after the first explorations. The largest Oneota village was located along the Big Sioux River in northwest Iowa at the present day Blood Run National Historic Landmark. This village was home to the Ioway and Oto, and possibly the Omaha and Ponca. Other Ioway villages have been located along the Upper Iowa River and in Iowa’s great lakes region.

From the late 1600s to the early 1800s, fur traders and missionaries made various settlements in Iowa. Unfortunately, no journals are found from these people, perhaps due to the loss of journals. The first recorded settlement was by Julien Dubuque in 1788 near the Mesquakie’s lead mines near present day Dubuque. In 1796, Dubuque received a land grant from the Governor of Spain who resided in New Orleans at the time. This land grant gave Dubuque permission to work 189 acres of Spain’s land. While the land was commonly referred to as the “Lead Mines,” Dubuque decided to change the name to “Mines of Spain.” This name is still represented by the Iowa DNR’s *Mines of Spain State Recreation Area*.

In 1860, 187 years after Marquette and Joliet’s expedition, the population of Iowa reached 674,913. The number grew exponentially between 1860 and 1880, reaching 1.6 million. By 1900, 2.2 million people lived in Iowa and greater than 85% of the land was converted from wilderness to agriculture. In 2000, 2.9 million people resided in Iowa, the most biologically altered state in the country.

## **Procedure**

### **Part I**

1. Make copies of the student handout, *Destination Hydracon*. Distribute *Part I* to students.
2. Have the students read (or read to the students) *Part I* of *Destination Hydracon*.
3. Discuss the story, asking the following questions:
  - Why do you need to explore Hydracon?
  - What will you take with you?
  - What types of animals do you expect to find?
  - How will you travel?
  - How will you and your crew of 20 map the routes you travel?
4. Have students write a paper on their discoveries covering the above questions.
5. Allow time for students to report to the class as if they are in front of the “President of Earth.”

### **Part II**

1. Distribute *Part 2* of *Destination Hydracon*.
2. Have students read (or read to them) the second part of *Destination Hydracon*.
3. Ask the following questions:
  - What has happened to the animals you “saw” during your exploration of Hydracon?
  - How do you think you would feel if you actually explored Hydracon first? How do you think you would feel if you saw Hydracon 330 years later?

- Why did the people cut down the trees and till the grasslands?
  - What has happened to the water of Hydracon? Why?
  - Would this affect people who live on Hydracon? If so, how?
  - Would this affect wildlife that lives on Hydracon? If so, how?
4. Explain to the students that something similar happened to Iowa. Go over Iowa's history and the status of our water today (refer to *Iowa's Water*).
  5. Have students research what their county/town was like before Euro-American settlement and what it is like now. Possible sources of information include:
    - Historical surveys of counties (visit [www.iowater.net/educators/Wetlands/Wetlands.asp](http://www.iowater.net/educators/Wetlands/Wetlands.asp) for more information and to learn about the General Land Office)
    - Old newspaper articles
    - Dinsmore, J.J. 1994. A Country So Full of Game. Iowa City: University of Iowa Press.
    - County historical societies
    - Iowa Historical Society (visit [www.iowahistory.org](http://www.iowahistory.org) or write to the State of Iowa Historical Building, 600 East Locust Building, Des Moines, IA 50319-0290 for more information)
  6. Have students write a one- or two-page summary of their findings.

## **Evaluation**

How much research did students do for their papers? Check for proper use of grammar and correct spelling. Ask the following questions:

1. What are the similarities between Hydracon and Iowa, specifically the county/town where you live? What are the differences?
2. Have the people of Iowa been affected by actions of early settlers? If so, how?
3. Has wildlife been affected by actions of early settlers? If so, how?
4. In your opinion, do the people of Iowa need to protect their water? Why or why not?

## **Extensions**

Have students make a map, model, or drawing of their counties pre-settlement and post settlement.

Research the status of rivers that run through your county. Do they meet **water quality** (condition of water) standards that have been set for them (look at the Iowa DNR's water quality webpage: [www.state.ia.us/epd/wtresrce/wtrres.htm](http://www.state.ia.us/epd/wtresrce/wtrres.htm))? If no, why not?

Explore ways students can improve water quality in water bodies in your town/county.

### Destination Hydracon Part 1: Exploring the Water World

It is 300 years in the future. Earth has become overcrowded with people. Many of Earth's **natural resources** (raw materials provided by the Earth and usually processed into useful products) are gone due to improper **natural resource management** (the practice or act of controlling the harvest, protection or restoration, or other use of resources). The most important is the amount of **potable** (drinkable) **water**. The limited fresh water available for human use has been contaminated with a number of **pollutants** (substances that may contaminate air, water, or soil). The people of Earth cannot live in these conditions much longer. People are growing restless and want a better life.

The president of Earth has requested that you do a great favor for her and all civilization. She wants you to explore Hydracon, a newly discovered planet in the middle of the Milky Way. It is reported that this planet has many valuable natural resources that may be harvested and sent back to Earth. Most notable is abundant, clear, unspoiled water, something Earth has been short of for many years.

This **pristine** (unspoiled) planet also may serve as a landing station for future explorations deeper into the Milky Way and become a site for a military base to protect the people of Earth from other troublesome planets. Earth's inhabitants may even establish a settlement on Hydracon.

The president of Earth wants you to map Hydracon, describe the creatures you find, locate potential sites for military bases and settlements, and learn about the local cultures on the planet.

### Destination Hydracon Part 2: The Return Visit

You documented your journey to Hydracon and reported to the president when you returned home. People were very excited about your findings. They held parties and celebrations in your honor. Word spread about your journey. At first, few people moved to Hydracon. Then as tales of the richness of this world were told, more and more people moved.

People are amazed at the **pristine wilderness** (unspoiled natural areas) of the planet: clear running streams, great forests thousands of miles wide, and grasslands as far as the eye can see. People think there is no end to the amount of resources Hydracon has. To survive, they cut down trees to make homes and farms. They mow grasslands and till the soil to plant gardens and fields to feed their families and livestock. They also send natural resources back to Earth for people left behind.

A group of Hydracon historians find documentation of your first exploration of the planet. But, 330 years later there is not one square mile of land that is untouched. Many trees are gone, grasslands have vanished, and worst of all, the water (that everybody came for) is no longer unspoiled. It is dirty with many pollutants in it. Fish species that lived in the rivers when you first arrived are gone. There are few animals left anywhere. The historians begin to search for reasons for the decline of the planet...